

REMARKS

The Office examined claims 1-24, and all claims are rejected. With this response, claims 1-17 and 20-24 are amended to place the claims in better form, and to remove acronyms. The amendments are not made to distinguish the claims from the cited references. New claims 25 and 26 are added. All amendments and new claims are fully supported by the specification as originally filed. For at least the reasons discussed below, applicant respectfully requests reconsideration and withdrawal of the rejections.

The independent claims are 1, 17, 21, 22 and 24.

Specification

The specification is amended to correct a typographical error. Reference numeral 102 refers to the antenna in Figure 1, and the specification is amended to replace antenna “104” with antenna “102.” The specification is now in conformity with the drawings, and no new matter is added.

Claim Rejections Under § 102

In section 4, on page 2 of the Office Action, claims 1 and 22 are rejected under 35 U.S.C. § 102(e) as anticipated by Hong (U.S. Appl. Publ. No. 2003/0125078). Applicant respectfully submits that claim 1 is not disclosed or suggested by Hong, because Hong fails to disclose or suggest all of the limitations recited in claim 1. Claim 1 recites that tuning of a second antenna depends upon a signal type relayed to the second antenna, and the second antenna facilitates reception of signals in a second frequency band, and at least one frequency band received by a first antenna.

Applicant respectfully submits that Hong does not disclose or suggest at least these limitations recited in claim 1, because the first (310) and second (312) GPS/CDMA multiband antennas discussed in Hong receive the same combined RF signal, i.e. GPS and CDMA signals, and tuning of the second antenna (312) is not dependent upon a signal type relayed to the second antenna, as recited in claim 1. See Hong paragraph [0027]. The tuning of the second antenna (312) in Hong is not dependent upon a signal type relayed to the second antenna, because the second antenna (312) is configured to always receive the combined RF signal, thereby allowing for switching between the combined RF signal received by the first antenna (310) and the

combined RF signal received by the second antenna (312) depending on which combined RF signal has the larger received signal strength indicator (RSSI). See Hong paragraph [0029] (the diversity technique of selecting the best out of many RF reception signals is called switching diversity). Therefore, Hong cannot disclose or suggest tuning the second antenna based upon a signal type relayed to the second antenna, because the second antenna must always be tuned to receive the same RF signal as the first antenna in order to allow for switching diversity.

Furthermore, contrary to the assertions of the Office, the limitation recited in claim 1 regarding tuning of the second antenna is not met by the teaching of Hong that the first and second antennas are designed to receive RF signals having different polarization characteristics. There is no mention in Hong that the second antenna is tuned dependent upon a signal type relayed to the second antenna. Instead, Hong only mentions that the first reception polarization characteristic of the first antenna (310) should have no relation to the second reception polarization characteristic of the second antenna (312). See Hong paragraph [0034]. However, the first and second antennas still receive the same RF signals (see Hong claim 7), therefore the tuning of the second antenna does not depend upon the signal type relayed to the second antenna, because the first and second antennas must receive the same combined RF signal.

Therefore, for at least the reasons discussed above, claim 1 is not disclosed or suggested by Hong. Independent claim 22 contains limitations similar to those recited in claim 1, and is rejected for the same reasons as claim 1. Therefore, claim 22 is also not disclosed or suggested by Hong for at least the reasons discussed above in relation to claim 1.

Claim Rejections Under § 103

In section 6, on page 3 of the Office Action claims 1-2, 5-6, 8-9, 11, 13, 16-17, 20-22 and 24 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hong in view of Enoki (U.S. Patent No. 6,014,571). Independent claim 1 is not disclosed or suggested by the cited references, alone or in combination, for at least the reasons discussed above in relation to the rejection of claim 1 under § 102, because the cited references fail to disclose or suggest all of the limitations of claim 1. Furthermore, independent claims 17, 21, 22 and 24 contain limitations similar to those recited in claim 1, and therefore are also not disclosed or suggested by the cited references, because the cited references at least fail to disclose or suggest tuning a second antenna to facilitate reception of a signal in at least one of the bands received by a first antenna.

In addition, independent claim 21 recites coupling the second antenna to a first switch, which in turn is coupled to a first tuning circuit and a second tuning circuit, and the second antenna is also coupled to a second switch that is in turn coupled to a first receiving component and a second receiving component. Figure 5 of Enoki discloses a switchable tuning circuit 25 with switches SW1 and SW2 for connecting the switchable tuning circuit 25 to a variable gain amplifying circuit 14. While two switches (SW1, SW2) are disclosed, neither of these switches are coupled to a first receiving component and to a second receiving component, as recited in claim 21. In addition, the switch 38 shown in Figure 10 of Enoki is for switching between antennas 100b and 100c. The switch 38 is for changing the antenna that is used, and neither of the antennas (100b, 100c) are first or second receiving components, as recited in claim 21. The first receiving component recited in claim 21 facilitates one of processing, transduction, and modulation of a signal in a GPS band, and the second receiving component facilitates one of processing, transduction, and modulation of a signal in at least one of the bands received by a first antenna. The antennas (100b, 100c) are not receiving components as recited in claim 21, and as such Enoki fails to disclose or suggest coupling a second switch to a first and second receiving component. Therefore, for at least the reasons discussed above, even if the cited references were combined, the limitations recited in claim 21 would not be the result, because the cited references, alone or in combination, fail to disclose or suggest all of the limitations recited in claim 21.

Furthermore, there is no motivation or suggestion to modify the cited references to arrive at the limitations recited in claim 21. As discussed above, Hong selects the best out of the RF reception signals received by the antennas. See Hong paragraph [0029]. If Hong was modified according to the teachings of Enoki in the manner described on page 6 of the Office Action, the principle of operation in Hong would be changed. The Office asserts on page 6 of the Office Action that Hong can be modified in order to switch between the first and second antennas by generating an antenna switching signal. However, the antenna switching signal discussed in Enoki actually changes which antenna is used. If Hong were modified so that only one antenna is used, it would not be possible to compare the RF signals received by each antenna to determine which signal is the strongest, and thereby select that signal. If the proposed modification or combination of the prior art would change the principle of operation of the prior art being modified, then the teachings of the references are not sufficient to render the claims

prima facie obvious. See MPEP § 2143.01. Therefore, for at least this additional reason, the cited references alone or in combination fail to disclose or suggest all of the limitations recited in claim 21.

Independent claims 17 and 24 contain limitations similar to those recited in claim 21, and for at least the reasons discussed above, and for those reasons discussed in relation to claim 1, independent claims 17 and 24 are not disclosed or suggested by the cited references.

Claims 2, 5, 6, 8, 9, 11, 13, 16 and 20 all ultimately depend from an independent claim, and are patentable over the cited references at least in view of their dependencies.

In section 7, on page 8 of the Office Action claims 7 and 10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hong in view of Enoki in further view of Braun et al. (U.S. Patent No. 6,980,782). Claims 7 and 10 all ultimately depend from an independent claim, and are patentable over the cited references at least in view of their dependencies.

In section 8, on page 9 of the Office Action claim 12 is rejected under 35 U.S.C. § 103(a) as unpatentable over Hong in view of Enoki in further view of Balchunas et al. (U.S. Appl. Publ. No. 2006/0097171). Claim 12 ultimately depends from an independent claim, and is patentable over the cited references at least in view of its dependency.

In section 9, on page 10 of the Office Action claims 3, 4, 15 and 23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hong in view of Enoki in further view of Eggleston (U.S. Patent No. 6,414,640). Claims 3, 4, 15 and 23 all ultimately depend from an independent claim, and are patentable over the cited references at least in view of their dependencies.

In section 10, on page 11 Office Action claims 14, 18 and 19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hong in view of Enoki in further view of OFFICIAL NOTICE. Claims 14, 18 and 19 all ultimately depend from an independent claim, and are patentable over the cited references at least in view of their dependencies.

New Claims 25 and 26

New claims 25 and 26 depend from independent claim 1, and are believed to be patentable over the cited references at least in view of their dependencies.

Conclusion

Applicant respectfully submits that the present application is in condition or allowance and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to change any fee deficiency required to submit this request to deposit account number 23-0442.

Respectfully submitted,

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Keith R. Obert
Keith R. Obert
Attorney for the Applicant
Registration No. 58,051

KRO/kas
WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
755 Main Street, P.O. Box 224
Monroe, CT 06468
(203) 261-1234
USPTO Customer No. 004955